

REMARKS

Applicant respectfully requests reconsideration of the above-noted application in view of the current amendments and arguments.

Specification

1. The specification was objected to on page 11, lines 4 and 6, since "44" referring to "suction cups" was mislabeled, and should be properly referred to as "24." Applicant believes suction cups 44 are referred to properly, as can be seen in Figures 1 and 3. Applicant would like to note that suction cups 44 are distinct from vacuum cups 24, as is shown in Figure 1.

The Examiner suggested that figure number "9" on page 12, line 13 be changed to -- 4 -- . However, Applicant does not see number "9" on page 12, line 13. Applicant believes the references to Figures 7, 8, and 9 on page 12 are proper, and asks for clarification from the Examiner as to the above-suggested reference change.

2. Applicant has amended the title to read "GRIPPING AND VACUUM END EFFECTOR FOR TRANSFERRING ARTICLES," which applicant believes will suffice as being more indicative of the claimed invention.

Claim Objections

Claim 18 was objected to for lack of antecedent for the term "items" in line 20. Applicant has amended claim 18 to insert -- said -- before "items." No new matter has been added to the claim. The amendment was only typographical in nature and should not be considered as limiting the scope of the claim.

Claim Rejections – 35 U.S.C. § 112

Claims 8 and 11 were rejected under 35 U.S.C. § 112 ¶ 2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention. Claim 8 was rejected for lack of antecedent basis

for the term "frame." Applicant has cancelled claim 8 and rewritten it as new claim 21, deleting the term "the frame" from the claim and including all the limitations of the base claim 1 that claim 8 depends on, thereby removing the need for proper antecedent basis for the term "the frame". As currently stated, Claim 21 sufficiently interrelates the elements of what the applicant regards as his invention. No new matter has been added to claim 21, and the current amendment should not be considered limiting on the scope of the claimed invention.

Claim 11 was rejected since the phrase "a plurality of suction cups located on said arms" was not clearly understood by the Examiner. Applicant has cancelled claim 11 and rewritten claim 11 as dependent claim 24. The suction cups stated in claim 24 should be clearly understood as illustrated in Figures 1 and 3 as reference numeral "44," and referenced in the specification on page 11, lines 1-7. No new matter has been added to claim 24.

Claim Rejections – 35 U.S.C. § 102

Claims 1-5, 7, 12-15, and 17-19 were rejected under 35 U.S.C. § 102(b) as being unpatentable in view of Holter, U.S. Patent No. 5,727,832. Applicant has amended independent claim 1 to state that the "first and second gripping element [are] arranged separately and independently from said vacuum port." As noted in the specification, the lack of vacuum means in the gripping blades allows for smoother handling of the items and, also, provides for a less complex effector (see page 4, lines 19-30 and page 9, lines 11-21). This feature patentably distinguishes the present application from the prior art. Applicant requests that independent claim 1, along with claims 2-5, 7, and 12, which depend from claim 1 be passed to allowance.

Applicant respectfully disagrees with the Examiner's characterization of claim 13 and believes the claim, as written, is patentably distinguishable over the prior art. The Examiner has stated that Holter has a first and second gripping surface located at the outside portion of the surround. However, the Applicant is not suggesting, in independent claim 13, that the gripping surfaces are located on

the outside of the surround, but that the gripping surfaces are located outboard of the surround, which suggests that the gripping surfaces are separate from the surround. The advantage of the current invention having the gripping surfaces located outboard and separate from the outside of the surround is that the vacuum capability of the surround is not affected by the position of the gripping surfaces. Thus, the seal formed by the surround is more constant than previous seals. A more constant seal provides for a more efficient end effector and system for lifting and moving items. Claim 18 has been amended to state that the gripping elements are located outboard of the surround. Accordingly, claims 13 and 18 are believed to recite patentably distinguishable subject matter over the prior art and are believed to be in condition for allowance.

Claims 2-5, 7, 12-15, 17, and 19, were also rejected under Holter. Claims 2-5, 7, 12-15, and 17 depend from independent claims 1, 13, and 18, which are now believed to be in condition for allowance, are also believed to recite patentably distinguishable subject matter, and allowance is requested. Claim 19 has been cancelled.

Allowable Subject Matter

Claim 6, 8-11, and 16 were objected to as being dependent on rejected claims, but would be allowable if rewritten including all of the limitations of the base and any intervening claims. The claims have been cancelled and rewritten as new claims 20-25, respectively. Allowance of claims 20-25, inclusive, is respectfully requested.

Conclusion

The prior art made of record and not replied upon is noted.

The Applicant has addressed and corrected the informalities noted by the Examiner in the specification, and believes the specification is proper.

Applicant has amended claims 1 and 18, and has added new claims 20-25, inclusive. Applicant has cancelled claims 6, 8-11, inclusive, and 19. Applicant believes original claims 2-5, inclusive, 7, and 12-17, inclusive, amended claims 1 and 18, and new claims 20-25, inclusive, distinctly point out the features that patentably distinguish the present invention from the prior art. Applicant requests these claims be passed to allowance.

Respectfully Submitted,

By



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